

REMARKS/ARGUMENTS

Claims 1-42 are pending. Claims 1-33 are rejected. Claims 34-42 are withdrawn.

Election/Restrictions

The Office Action dated May 25, 2005 (hereinafter Office Action) withdrew consideration of Claims 34-42 as being constructively directed to a non-elected invention. Claims 34-42 are said to be directed at detecting tampering with computer programs (classified in 713/187), and Claims 1-33 are said to be directed at preventing tampering with computer programs (classified in 713/194).

The classifications cited may have use when categorizing patent applications generally. However, even assuming that the Office Action's characterization of the claims is accurate, in this specific case, the classifications are merely arbitrary, largely meaningless distinctions. The present Application concerns securely rendering digital content in software. *See* Para. [18]. To ensure such secure rendering, one of ordinary skill in the art would naturally have to consider not only the tamper prevention system itself, but also detecting whether such tamper prevention system had failed. Indeed, in the invention claimed in Claims 1-42, tamper detection is not a separate utility from the tamper prevention system, as asserted by the Office Action. Rather, the tamper detection system is a natural and characteristic aspect of the tamper prevention system.

Furthermore, the Office Action incorrectly characterized Claims 1-33 as being classified in 713/194, which is described as "Subject matter wherein a **physical barrier** has been provided to protect a component providing cryptographic processing in a digital processing system." Nowhere in Claims 1-33 or anywhere else in the Application is reference made to using a physical barrier to protect a cryptographic processing component. As is clear from reading the claims in light of the specification, the claimed invention is directed entirely towards protections that take place in software. Therefore, Claims 1-33 cannot be properly classified in 713/194.

The Office Action probably correctly classified Claims 34-42 into 713/187, which is described as, "Subject matter wherein a cryptographic technique is used to determine that a

change has occurred to a particular computer program.” Applicant respectfully submits that Claims 1-33 may be properly classified into 713/187 as well.

In any event, Claims 1-42 are all directed at a single invention, and Applicant traverses the requirement for restriction regarding Claims 34-42. Applicant requests reconsideration and withdrawal or modification of the requirement. Pursuant to 37 CFR § 1.143, Applicant also provisionally elects to continue prosecution of Claims 1-33.

35 U.S.C. § 103 Rejections

Claims 1, 5-8, and 29 were rejected as being unpatentable over U.S. Patent No. 6,044,469 to Horstmann (hereinafter “*Horstmann*”), in view of an AMINO COMMUNICATIONS press release published on M2 Presswire and elsewhere (hereinafter “*Amino*”), and further in view of U.S. Patent No. 6,157,721 to Shear (hereinafter “*Shear*”), and further in view of Published U.S. Patent Application No. 2003/0002447 to Jackson (hereinafter “*Jackson*”). Applicant respectfully submits that Claims 1, 5-8, and 29 are patentable over *Horstmann* in view of *Amino*, and further in view of *Shear*, and still further in view of *Jackson*.

As an initial matter, Applicants respectfully disagree with the Examiner’s teaching, suggestion, or motivation analysis found on page 5 of the Office Action. The Office Action states that any judgment on obviousness is in a sense necessarily based on hindsight reasoning. But the Office Action goes on to cite *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971), for the proposition that hindsight reasoning is proper so long as it takes into account only knowledge that was within the level of ordinary skill in the art at the time the claimed invention was made, and so long as the hindsight reasoning **does not include knowledge gleaned only from the applicant’s disclosure**. *See id.* (emphasis added).

There are several problems with this proposition. First, even if it were an accurate statement of current Federal Circuit practice, the hindsight reasoning employed in the Office Action includes knowledge gleaned only from the applicant’s disclosure. Specifically, the Office Action has used knowledge of the feature set of the claimed invention as a blueprint, and without this blueprint, one of ordinary skill in the art at the time the claimed invention was made would have had no motivation whatsoever to seek out and gather specific elements

from the four or five cited pieces of art. Only in light of the claimed invention would one of ordinary skill have any motivation to piece together specific elements from the four wildly disparate pieces of art cited in the Office Action. Thus, the hindsight reasoning engaged in by the Office Action is improper even in view of its own cited authority.

But there is an additional problem with that cited authority, which was decided by the United States Court of Customs and Patent Appeals in 1971. Specifically, it does not reflect refinements to the obviousness doctrine as developed by the Federal Circuit over the past twenty-five years. For example, consider a more recent discussion of hindsight reasoning,

In making the assessment of differences, section 103 specifically requires consideration of the claimed invention “as a whole.” Inventions typically are new combinations of existing principles or features. The “as a whole” instruction in title 35 prevents evaluation of the invention part by part. Without this important requirement, an obviousness assessment might break an invention into its component parts (A + B + C), then find a prior art reference containing A, another containing B, and another containing C, and on that basis alone declare the invention obvious. This form of hindsight reasoning, using the invention as a roadmap to find its prior art components, would discount the value of combining various existing features or principles in a new way to achieve a new result—often the very definition of invention.

Ruiz v. A.B. Chance Co., 357 F.3d 1270, 1275 (Fed. Cir. 2004) (internal citations omitted); *see also, e.g., Texas Instruments Inc. v. U.S. Intern. Trade Com'n*, 988 F.2d 1165, 1178 (Fed. Cir. 1993) (holding that it is impermissible to “piece the invention together using the patented invention as a template” when the “references in combination do not suggest the invention as a whole”); *Env'tl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698 (Fed.Cir.1983) (noting that “**virtually all [inventions] are combinations of old elements**”). Moreover, it is important that an Office Action rely on objective evidence and specific factual findings with respect to the motivation to combine references. *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002).

Applicants respectfully assert that the Office Action has engaged in exactly the sort of obviousness assessment that is forbidden by modern case law: the Office Action has broken the claimed invention into its component parts (A + B + C), then has found a prior art reference that purportedly contains A, another that purportedly contains B, and another that purportedly contains C. Despite making a perfunctory assertion that a motivation is found because “media players require security,” the Office Action has declared the invention

obvious based solely on a clearly improper “component parts” analysis. Furthermore, the Office Action presents no objective evidence of specific factual findings to support its assertion that there was motivation to combine references.

Moreover, there are significant problems with several of the cited pieces of art. First, as a general proposition, the *Amino* press release is so brief and vague that it should not be said to enable any component of any invention, notwithstanding the fact that it does not stand for the proposition for which it is cited against the claimed invention.

An assertedly anticipating reference must provide an enabling disclosure of the desired subject matter; a reference cannot anticipate an element of a claim if that element cannot be produced from the reference without undue experimentation. *See Elan Pharm., Inc. v. Mayo Found. For Med. Educ. & Research*, 346 F.3d 1051, 1054, 68 USPQ2d 1373, 1376 (Fed. Cir. 2003).

The relevant portion of the *Amino* press release is so brief that it can be quoted in its entirety:

Within the growing spectrum of broadband communications, different content and processes require varying levels of security - making it impossible to select a single regime that fits all. A new solution... overcomes the challenge by **varying the level of encryption in real time** depending upon the type and value of content or transaction

(emphasis added). There is simply nothing more in *Amino* that could possibly enable or anticipate any aspect of a later invention. And as will be discussed in greater detail below, *Amino* does not teach or even suggest the claimed invention because none of the claims have anything to do with varying the level of encryption in real time. Thus, the *Amino* reference would not have enabled or suggested any aspects of the claimed invention.

Second, *Jackson* is not analogous prior art and can therefore not be a basis for rejection of Applicant’s claims. “In order to rely on a reference as a basis for rejection of an applicant’s invention, the reference must either be in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). “A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor’s endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.” *In re*

Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992). It is necessary to consider “the reality of the circumstances”—in other words, common sense—in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor. *In re Oetiker*, 977 F.2d 1443, 1447, 24 USPQ2d 1443 (Fed. Cir. 1992). Furthermore, the PTO must show substantial evidence to adequately support its findings on the scope of the field of endeavor in the Application’s written description and claims, including the structure and function of the invention. *In re Bigio*, 381 F.3d 1320, 1326 (C.A.Fed.,2004).

The present Application is in the field of endeavor of securely rendering digital content in software. *See* Para. [18] (“The present invention includes organization and cooperation between a collection of digital content rendering modules to collectively protect the digital contents being rendered.”); Para. [19] (“The description will be presented in terms of operations performed by a processor based device...”).

By contrast, *Jackson*’s field of endeavor involves controlling mechanical or robotic systems having a large number of actuators. *See Jackson*, Para. [40] (“The system 100 can be any type of system that is used in any number of different types of applications, such as but not limited to an air jet paper transport systems, robotic systems and the like.”); *Jackson*, Para. [61] (“An object 260 is disposed over the array of air jets 250. In this exemplary embodiment, the object 260 is a piece of paper. The air jets 250 will, under the control of the controller/allocator 210, move the object 260 to a particular position or orientate the object 260 in a particular orientation.”).

There is no suggestion that the Application’s invention deals with any matter involving mechanical or robotic control systems. Nor is there any suggestion that *Jackson* deals with any matter related to rendering digital content.

It defies common sense to suggest that one of ordinary skill in the art of secure software rendering of digital content as in media players would have even been aware of, let alone had motivation to combine, a mechanical arts reference such as *Jackson* that deals with problems of allocating physical actuators as in an air jet paper transport system. Yet the Office Action has, without comment, suggested that one of ordinary skill, struggling with developing software to securely render protected content for a media player, would know of and be motivated to combine a reference (*Jackson*) from a nonanalogous field (mechanical

arts) that provides engineering solutions for systems with a large number of elements such as physical sensors and/or mechanical actuators. Granted, *Jackson*'s mechanical actuators are software-controlled. However, it defies common sense to suggest that all fields of endeavor that make use of software are analogous or that all software solutions are reasonably pertinent to all problems that can be addressed in software.

Turning to the merits of the individual claim rejections, Claims 1 and 29 were rejected as being anticipated by *Horstmann* in view of *Amino* and further in view of *Shear* and further in view of *Jackson*. Claim 1, as previously amended recites as follows:

1. An apparatus comprising:
 - a **tamper resistant digital content recovery module** to recover protected digital contents of various types in an obfuscated manner;
 - a plurality of plain text digital content rendering modules communicatively coupled with each other in a hierarchical manner forming a hierarchy of modules, with selective combinations of the plain text digital content rendering modules to be selectively employed to render the recovered digital contents of the various types, including one of the plain text digital content rendering modules occupying a root position of the hierarchy to exclusively receive all types of the recovered digital contents to be rendered, from the tamper resistant digital content recovery module;
 - one or more storage units operative to store said tamper resistant module and said plurality of plain text digital content rendering modules; and
 - a processor coupled with the one or more storage units to execute the tamper resistant module and the plurality of plain text digital content rendering modules

(emphasis added). Claim 29 recites similar elements in the context of an article of manufacture claim.

According to the Office Action, *Horstmann* discloses a tamper resistant digital content recovery module. The Office Action further states that

[t]he definition of tamper resistant is to prevent from weakening or changing. The system of *Horstmann* protects the content and therefore prevents from weakening or changing. The claim is silent as to whether the object is tamper resistant because it prevents weakening of the content or it is tamper resistant because it prevents weakening of itself.

Office Action, p. 2-3. However, Applicants respectfully submit that *Horstmann* does not disclose a **tamper resistant** digital content recovery module as claimed in Claims 1 and 29.

First, the Office Action incorrectly defined “tamper resistant.” It is always necessary to review the specification to determine exactly how the inventor has used any particular terms. *Vitronics Corp. v. Conceptronic*, 90 F.3d 1576, 1583, 39 U.S.P.Q.2D (BNA) 1573 (Fed. Cir. 1996). The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979, 34 USPQ2d 1321, 1330 (Fed. Cir. 1995). As the Federal Circuit has repeatedly stated, “claims must be read in view of the specification, of which they are a part.” *See id.* at 979, 34 USPQ2d at 1329. The specification is the single best guide to the meaning of a disputed term. *Vitronics*, 90 F.3d at 1583.

The Application clearly states that generally, “[t]he term ‘tamper resistant’ as used in this Application refers to a broad range of techniques and/or measures employed to thwart and/or make difficult unauthorized meddling, interfering or other acts of like kind.” Para. [7]. Specifically, as applied to the digital content recovery module, “tamper resistant” means “that the recovery operation may be performed **in an obfuscated manner**.” Para. [47]. Finally, the Application states that “[t]he phrase ‘obfuscating the recovery’, as used in this Application, refers to the employment of techniques and/or measures to disguise, obscure or otherwise make **difficult for a third party to observe, discern or learn** the operations performed to recover the protected contents.” Para. [25]. Thus, reading Claims 1 and 29 in view of the specification of which they are a part, “tamper resistant digital content recovery module” has a clear, specific meaning: it is a digital content recovery module in which techniques are employed to make it difficult for a third party to observe, discern, or learn the operations performed to recover the protected contents.

In contrast, *Horstmann* does not disclose, discuss, imply, hint at, or suggest that it takes steps to shield its recovery operations from observation by a third party. Thus, content protected by *Horstmann*’s method is vulnerable to a third party who makes careful observations and learns the operations performed to recover the protected contents. Because neither *Horstmann*, nor *Horstmann* in combination with any of the other cited references disclose a **tamper resistant** digital content recovery module, the Office Action has failed to state a *prima facie* case that Claims 1 and 29 are obvious.

In addition, the Office Action also incorrectly argues that the *Amino* press release discloses a system to “recover protected digital contents of various types in an obfuscated

manner.” However, the *Amino* press release does not teach or even suggest that digital contents are **recovered** in an obfuscated manner. The *Amino* press release discloses only providing varying levels of security by “varying the level of encryption in real time depending upon the type and value of content or transaction” as the content is transmitted across a broadband network. Thus, *Amino* discloses that content may be protected for transmission and further suggests that some types of content will be more difficult for a third party to transform into an unprotected state.

However, Claims 1 and 29 recite additional protective measures that are not taught, disclosed, or even suggested by the *Amino* press release. Specifically, *Amino* does not teach or suggest that protected digital contents are recovered **in an obfuscated manner**. The Application describes this additional layer of protection:

The term “recovery”, as used in this application, refers to the process of transforming content from a protected state to an unprotected state.... The phrase “obfuscating the recovery”, as used in this application, refers to the employment of techniques and/or measures to disguise, obscure or otherwise make **difficult for a third party to observe, discern or learn the operations performed** to recover the protected contents.

Para. [25] (emphasis added). Thus, Claims 1 and 29 disclose a layer of protection that exists in addition to and independently from the level of protection applied to any given piece of content.

To clarify, suppose a piece of high value content is being transmitted across a network to a media player. *Amino* discloses that this content may be highly protected, perhaps by being encrypted with a highly secure algorithm. Therefore, a third party may have difficulty transforming this content into an unprotected state. Thus, *Amino* provides a certain level of protection for that content, but *Amino* also assumes that the third party will be unable to break the encryption that was applied to the content. This assumption points to a subtle, nonobvious problem with *Amino*’s scheme. Specifically, *Amino* provides little or no protection if a third party can figure out (and thereby replicate) the operations performed to decrypt the content. Claims 1 and 29 close this vulnerability by reciting a system that makes it difficult for a determined third party to figure out what operations the software uses to transform the content into an unprotected state. Thus, regardless of the level of protection applied to content as it is transmitted across a network, Claims 1 and 29 further protect that

content by obfuscating the recovery process. In any reasonable interpretation, *Amino* does not teach or even remotely suggest that the content recovery process is so obfuscated. Therefore, *Amino* cannot be said to teach or suggest this element of Claims 1 and 29.

The Office Action further incorrectly argues that *Horstmann* discloses “exclusively receiv[ing] all types of the recovered digital contents to be rendered,” and that *Jackson* discloses a root module. The Office Action suggests that these two references may be combined to disclose “digital content rendering module[] occupying a root position of the hierarchy to exclusively receive all types of the recovered digital contents to be rendered,” as in Claims 1 and 29. However, neither reference on its own can be plausibly said to enable the relevant section of Claims 1 and 29, and furthermore, there is nothing to suggest a motivation to combine these two references. Therefore, the combination of the two does not render this aspect of Claims 1 and 29 obvious.

As discussed at length above, *Jackson* is not analogous art. Moreover, as also discussed above, the Office Action states no plausible motivation to combine *Jackson* with *Horstmann* or any of the other references that together purportedly render these claims unpatentable. That said, even if *Jackson* were analogous art, it does not teach or suggest “a root module,” and furthermore, *Jackson* does not even begin to approach teaching or suggesting what is claimed in Claims 1 and 29. Specifically, what is claimed is not an isolated, generic “root module” divorced from all context. Rather, what is claimed is a “digital content rendering module[] occupying a root position of the hierarchy to exclusively receive all types of the recovered digital contents to be rendered.”

According to the Office Action, “Jackson teaches an apparatus and methods that approximately solve an **actuation allocation problem** by breaking the solution into modules.” Office Action, p. 8 (emphasis added). The Office Action further states that one would have been motivated to combine *Horstmann* with *Jackson* because doing so “enables the system to break down the [actuation allocation] problem into smaller [actuation allocation] problems that can be solved in an optimal way or by breaking the smaller allocation problem down into yet smaller problems.” Office Action, p. 9.

The Office Action does not, however, explain how a solution to an actuation allocation problem is in any way relevant to a digital content rendering module occupying a root position of the hierarchy to exclusively receive all types of the recovered digital contents

to be rendered. There is no suggestion in *Horstmann* that its apparatus could be combined with a solution to an actuator problem as disclosed in *Jackson*. Nor is there any solution in *Jackson* that its method could be combined with a solution to protect trial software as disclosed in *Horstmann*. Furthermore, there is no suggestion in either piece of art to suggest why particular components of either of them should be isolated and combined with any other isolated components to create digital content rendering modules occupying a root position of the hierarchy to exclusively receive all types of the recovered digital contents to be rendered. Therefore, on this ground as well, the Office Action has failed to establish a *prima facie* case of obviousness for Claims 1 and 29.

Claims 5 and 8 were rejected as being anticipated by *Horstmann* in view of *Amino* and further in view of *Shear* and further in view of *Jackson*. First, Applicants respectfully reiterate their objections to the use of *Jackson* as prior art. Second, Applicants are unable to discern how the Examiner believes that *Shear* fits into the puzzle. The Office Action states that “*Shear* discloses a system wherein... the non-leaf modules [sic] is equipped to verify the immediate downstream module as not having been compromised.” Office Action, p. 9. However, on the following pages, the Office Action states two times that “... *Shear* do[es] not disclose the non-leaf module is equipped to verify the immediate downstream module as not having been compromised.” Office Action, p. 10, 11. Applicant’s agree with the Office Action’s concession that *Shear* does not disclose this element of Claim 5. Because the Applicants and the Office Action are in agreement that not all elements of Claim 5 are disclosed in the cited art, Applicants respectfully submit that Claim 5 is in condition for allowance.

Furthermore, given the Office Action’s concession that “... *Shear* do[es] not disclose the non-leaf module is equipped to verify the immediate downstream module as not having been compromised,” as in Claim 5, Applicants respectfully submit that *Shear* can also not disclose, “a system wherein the non-leaf modules [sic] is equipped to verify the immediate downstream module as not having been compromised **by verifying a signature of the immediate downstream module,**” as recited in Claim 8. Office Action, p. 9. Yet, despite its concession that *Shear* does not disclose verifying the immediate downstream module, Office Action p. 10, the Office Action asserts that *Shear* somehow does disclose verifying the immediate downstream module by a particular method, Office Action, p. 9. Applicants

respectfully submit that if *Shear* does not disclose the more general case (as conceded by the Office Action), it cannot disclose the more specific case. Because the Office Action has not asserted that all of the limitations in Claim 8 are taught or suggested by the cited art, the Office Action has not established a *prima facie* case of obviousness, and Applicants respectfully submit that Claim 8 is in condition for allowance.

The Office Action's rejection of Claim 6 suffers from exactly the same deficiency. After conceding that "... *Shear* do[es] not disclose the non-leaf module is equipped to verify the immediate downstream module as not having been compromised," the Office Action asserts with respect to Claim 6 that somehow *Shear* discloses that the "non-leaf module is equipped to verify the immediate downstream module as not having been compromised **at least during initialization**." Given the concession, the assertion with respect to Claim 6 cannot be correct. In addition, the Applicants object, for reasons discussed already, to the Office Action's reliance on *Jackson* with regards to Claim 6. Because the Office Action has not asserted that all of the limitations in Claim 6 are taught or suggested by the cited art, the Office Action has not established a *prima facie* case of obviousness, and Applicants respectfully submit that Claim 6 is in condition for allowance.

The Office Action's rejection of Claim 7 suffers from a similar deficiency. After conceding that "... *Shear* do[es] not disclose the non-leaf module is equipped to verify the immediate downstream module as not having been compromised," the Office Action asserts with respect to Claim 7 that somehow *Shear* discloses that the "non-leaf module is equipped to **further** verify the immediate downstream module **remains uncompromised** before each transfer of recovered digital content..." Given the concession that the non-leaf module does not verify the immediate downstream module in the first instance, the Office Action cannot be correct when it asserts with respect to Claim 7 that the non-leaf module again verifies the immediate downstream module before each transfer. In addition, the Applicants object, for reasons discussed already, to the Office Action's reliance on *Jackson* with regards to Claim 7. Because the Office Action has not asserted that all of the limitations in Claim 7 are taught or suggested by the cited art, the Office Action has not established a *prima facie* case of obviousness, and Applicants respectfully submit that Claim 7 is in condition for allowance.

Claims 2 and 30 were rejected as being unpatentable over *Horstmann*, in view of *Amino*, and further in view of *Shear*, and further in view of *Jackson*, and still further in view of U.S. Patent No. 5,991,399 to Graunke et al. (hereinafter “*Graunke*”). Claim 2 reads as follows:

The apparatus of claim 1, wherein the tamper resistant digital content recovery module is equipped to verify the plain text digital content rendering module occupying the root position of the hierarchy as not having been compromised, and to provide recovered digital content to the plain text digital content rendering module occupying the root position of the hierarchy, only upon having verified the plain text digital content rendering module occupying the root position of the hierarchy as not having been compromised.

Claim 30 recites similar language in the context of an article claim.

The Office Action asserts that *Horstman* discloses the tamper resistant digital content recovery module “with a root one of the plurality of hierarchically organized plain text digital content rendering module.” Applicants disagree with this assertion, but in any event, Claims 2 and 30 do not recite “with a root one of the plurality of hierarchically organized plain text digital content rendering module,” and Applicants are unable to discern how the quoted language is relevant to Claims 2 and 30.

Applicants do agree with the Office Action’s assertion that *Horstman* does not disclose “the root verifying an immediate downstream module is uncompromised before transferring the first digital content to the immediate downstream module to further the rendering of the first digital content.” But while this statement is true as far as it goes, Applicants are again unable to discern how this language is relevant to Claims 2 and 30, which do not recite any such language.

The Office Action further asserts that *Jackson* discloses a “root module.” Applicants reiterate their objections to the Office Action’s reliance on *Jackson*. For the reasons discussed at length above with respect to Claims 1 and 29, *Jackson* is not analogous art, and the Office Action’s stated motivations to combine are fatally flawed. Furthermore, while *Jackson* may disclose a hierarchical system of some description, it most definitely does not disclose a “tamper resistant digital content recovery module [that] is equipped... **to provide recovered digital content to the plain text digital content rendering module occupying the root position of the hierarchy**, only upon having verified the plain text digital content rendering module occupying the root position of the hierarchy as not having been

compromised.” Nor does the Office Action point out any other art that discloses or suggests as much, alone or in combination. Therefore, the Office Action has not stated a prima facie case of obviousness under § 103(a), and Applicants respectfully request that the rejection of Claims 2 and 30 be withdrawn.

Claims 11 and 24 were rejected as being unpatentable over *Horstmann*, in view of *Amino*, and further in view of *Shear*, and further in view of *Jackson*, and still further in view of *Graunke*. Claim 11 reads as follows:

The apparatus of claim 1, wherein a first subset of the plain text digital content rendering modules are member modules of a first application domain, and a second subset of the plain text digital content rendering modules are member modules of a second application domain.

Claim 24 recites similar language, but depends from Claim 18.

Regarding “application domains,” the specification says,

The hierarchical authentication scheme of the present invention may also be extended to provide secure and authenticated communication channels across application domains to facilitate secure digital content rendering. FIG. 7 illustrates another example hierarchy including modules of multiple application domains, where the secure and trusted communication may be extended from the base application domain 702 to other third party application domains 712 and 714.

Para. [49]. The specification goes on to discuss two broad classes of domains: the base application domain, such as a digital content rendering application, written by one party; and application domains written or controlled by a third party. Such third party domains may further include a middleware application domain, such as the content management software of an MP3 player, and a device interface or physical transport. *See* para. [49-50]. Thus, Claims 11 and 24 recite apparatuses wherein modules from different parties can cooperate to render digital content in the manner described.

The Office Action asserts that *Horstmann* discloses digital content rendering modules from disparate application domains. In support of this assertion, the Office Action cites the following passage from *Horstmann*: “the software publisher is prompted to select from a variety of predefined software protection measures (software binding, executable binding, hardware binding, etc.). The software publisher may select all of the available software protection measures, none of them, or any logically consistent combination thereof.”

Horstmann, col. 6, lines 1-5. The Office Action summarizes this passage as disclosing “different methods of securing the data,” further stating that it would have been obvious for modules from a first application domain “**to also render modules** of a second application domain.” Office Action, page 14 (emphasis added).

The Office Action is correct insofar as the cited portion of *Horstmann* does disclose different methods of securing the data. However, the Office Action has mischaracterized the fundamental nature of what is claimed in Claims 11 and 24. Claims 11 and 24 cannot be interpreted to claim that modules from a first domain render modules from a second domain, as stated by the Office Action. On the contrary, it could not be clearer that according to Claims 11 and 24, modules from different domains cooperate to render protected digital contents, not that one module renders another module, as stated in the Office Action.

Moreover, the Office Action has also mischaracterized *Horstmann*. The Office Action does not explain how disclosing different methods of securing the data, as disclosed in *Horstmann*, teaches or suggests digital content rendering modules from a first and a second application domain, as claimed in Claims 11 and 24. *Horstmann* teaches merely that software may be protected by different binding methods. The Office Action does not explain how *Horstmann*, alone or in combination with other art, teaches or suggests that modules from different domains, as described in the current Application, may securely render digital content.

For the reasons just discussed, the Office Action has not stated a prima facie case of obviousness under § 103(a), and Applicants respectfully request that the rejection of Claims 11 and 24 be withdrawn.

Claims 3-4, 9-10, 12-23, 25-28, and 31-33 were rejected as being unpatentable over *Horstmann*, in view of *Amino*, and further in view of *Shear*, and further in view of *Jackson*, and still further in view of *Graunke*.

In rejecting Claim 12, the Office Action makes the bare assertion that *Horstmann* discloses a root one of a plurality of hierarchically organized plain text digital content rendering modules. However, the Office Action provides no citation to any language in *Horstmann* to support this assertion, and the assertion cannot be maintained in light of previous admissions. The Office Action previously admitted on at least two occasions that

Horstmann does not disclose or suggest a root module. Office Action, pages 8 and 14. If *Horstmann* does not disclose a root module as recited in Claims 1, 5, and 29 (Office Action, page 8) and in Claims 2 and 30 (Office Action, page 14), then *Horstmann* cannot disclose or suggest a root one of a plurality of hierarchically organized modules, as recited in Claim 12. Therefore, the Office Action has not shown that each and every element of Claim 12 is taught or suggested by the cited art, as is required to state a prima facie case.

The Office Action also asserts that the *Amino* press release discloses recovering protected digital contents of a plurality of types in an obfuscated manner. However, as discussed at length above with respect to Claims 1, 5-8, and 29, the *Amino* press release is not an enabling disclosure.

For the reasons just discussed, Applicants respectfully submit that Claim 12 is in condition for allowance.

The Office Action grouped together its rejection of independent Claims 18 and 25, despite the fact that these two claims do not recite the same subject matter. This portion of the Office Action apparently seems to be more closely directed at Claim 18 than at Claim 25. Accordingly, several elements of Claim 25 are not addressed. Specifically, the Office Action does not assert that the cited art discloses or suggests verifying with a root digital content rendering module that each immediately downstream module has not been compromised, **“during an initialization period.”** Also, the Office Action does not assert that the cited art discloses or suggests “transferring with said root one of said modules the first digital content to the re-verified immediate downstream module to further the rendering of the first digital content.” Accordingly, on this basis alone, the Office Action has not stated a prima facie case of obviousness for Claim 25. However, the Office Action’s rejection of Claim 18 and of the remaining elements of Claim 25 is also deficient.

For example, the Office Action’s rejection of Claims 18 and 25 makes the bare assertion that *Horstmann* discloses a root one of a plurality of hierarchically organized plain text digital content rendering modules. However, as discussed immediately above with respect to Claim 12, this assertion cannot be maintained in light of previous admissions that *Horstmann* does not disclose or suggest a root module. Therefore, the Office Action has not

shown that each and every element of Claims 18 and 25 are disclosed or suggested by the cited art.

The Office Action does discuss at some length several elements that are not present in either Claim 18 or 25. For example, the Office Action argues that *Amino* discloses recovering various types of digital content in an obfuscated manner. As already discussed, Applicant submits that *Amino* does not in fact disclose or suggest this element. However, Applicant cannot discern why *Amino* is relevant at all to Claims 18 and 25, neither of which recites recovering various types of digital content in an obfuscated manner.

The Office Action has also failed to state a prima facie case of obviousness for Claims 3 and 19-20. Claim 3 recites as follows:

The apparatus of claim 2, wherein the tamper resistant digital content recovery module is equipped to verify the plain text digital content rendering module occupying the root position of the hierarchy, responsive to a request from the plain text digital content rendering module occupying the root position of the hierarchy to recover a protected digital content

In rejecting Claim 3, the Office Action asserts that the following elements are obvious in light of the cited art: (1) “the tamper resistant digital content recovery module;” (2) “with a root one of the plurality of hierarchically organized plain text digital content rendering module [sic];” and (3) “verifying the content rendering module.” The first two are said to be disclosed by *Horstmann*, although no citations are given to support this assertion, and the third is said to be disclosed by *Graunke*. Of these, (2) does not appear to be particularly on point, given that Claim 3 does not recite a plurality of hierarchically organized modules. In addition, as discussed above with respect to Claim 12, assertion (2) cannot be maintained in light of previous admissions that *Horstmann* does not disclose or suggest a root module. Accordingly, the Office Action has not stated a prima facie case of obviousness for Claim 3.

The Office Action analyzed Claims 19-20 alongside Claim 3, even though the subject matter of Claims 19-20 differs greatly from that of Claim 3. Claim 3 deals in pertinent part exclusively with root content rendering modules. By contrast, Claims 19-20 deal with “non-leaf” modules, which include, but are not limited to the root module. *See* Application, para. [28], Figure 2. Similarly, non-leaf modules are not limited to content rendering modules.

Claims 21 and 31 also deal with non-leaf modules verifying the immediately downstream modules. Although the Office Action analyzed Claims 21 and 31 independently from Claims 19-20, it asserts almost word for word the exact same art against Claims 21 and 31 that is said to render Claims 19-20 obvious. Therefore, it is appropriate to include Claims 21 and 31 in the discussion of Claims 19-20.

The Office Action's analysis seems primarily directed at Claim 3, which differs from Claims 19-20 (and Claims 21 and 31). While Claim 3 recites that the recovery module verifies the root module when the root module requests protected content, Claim 31 recites that a non-leaf module verifies the immediate downstream module. Claim 19 adds the limitation that the verification happens at least during initialization. Claim 21 recites that the verification happens by verifying a signature of the downstream module. Claim 20 recites that a non-leaf module verifies the immediate downstream module before each transfer of digital contents to the downstream module. Thus, unlike Claim 3, Claims 19-21 and 31 deal with non-leaf modules, not root modules; Claims 19-21 and 31 deal with verifying downstream modules, not verifying the uppermost (root) module; and Claims 19-21 and 31 deal with verifying modules that are not necessarily content rendering modules.

In light of these distinctions, the Office Action has not asserted that each element of Claims 19-21 and 31 are obvious in light of the cited art. For example, while the Office Action asserts that *Graunke* discloses verifying the digital content rendering module, Claims 19-20 do not deal with verifying a digital content rendering module. Rather, Claims 19-21 and 31 deal with verifying downstream (non-rendering) modules, an element that is not asserted to be obvious. Similarly, while the Office Action asserts that *Horstmann* discloses a root content rendering module, Claims 19-21 and 31 recite non-leaf modules, an element that is also not asserted to be obvious.

Accordingly, the Office Action has not stated a prima facie case of obviousness for Claims 19-21 and 31.

Claims 4, 13-15, and 26 are allowable at least because they depend from independent claims that have been shown to be allowable. In addition, Claims 4, 13-15, and 26 are allowable because as discussed above, the Office Action's assertion that *Horstmann* discloses

a root module cannot be maintained in light of previous admissions that *Horstmann* does not disclose or suggest a root module.

Claims 22 and 32 are allowable at least because they depend from independent claims that have been shown to be allowable. In addition, Claims 22 and 32 are allowable because the Office Action bases its rejection on a flawed premise: that the *Amino* press release discloses recovering protected digital contents of a plurality of types in an obfuscated manner. However, as discussed at length above with respect to Claims 1, 5-8, and 29, the *Amino* press release is not an enabling disclosure.

Claims 10, 23, and 33 are allowable at least because they depend from independent claims that have been shown to be allowable. In addition, the Office Action has not stated a prima facie case of obviousness regarding these claims. For example, regarding Claims 10 and 23, the Office Action states nothing beyond a general description of the claims:

In reference to claims 10 and 23 wherein the apparatus is a selected one of a wireless mobile phone, a palm sized personal digital assistant, a notebook computer, a set-top box, a desktop computer, a single processor server, a multi-processor server, and a cluster of coupled systems (column 5 lines 1-7).

Office Action, page 21. Similarly, regarding Claim 33, the Office Action states merely, “In reference to claim 33 wherein the recordable medium is a selected one of a magnetically recordable medium and an optically recordable medium.” Office Action, page 21. Merely describing the claim is insufficient to state a prima facie case of obviousness. Therefore, Applicants respectfully submit that Claims 10, 23, and 33 are in condition for allowance.

Claim 16 is allowable at least because it depends from independent Claim 12, which has been shown to be allowable. In addition, the Office Action has not stated a prima facie case of obviousness regarding the additional limitations of Claim 16. Specifically, the Office Action has not asserted that the final clause of Claim 16 is obvious in light of the cited art.

The final clause of Claim 16 recites as follows: “said root one... rendering said second digital content, with said root one re-verifying the same immediate downstream module is uncompromised before transferring the **second** digital content to the immediate downstream module to further the rendering of the **second** digital content.”

The Office Action does not assert that this element is obvious, instead asserting that *Graunke* discloses “the root verifying an immediate downstream module is uncompromised before transferring the **first** digital content to the immediate downstream module to further the rendering of the **first** digital content.” Therefore, Applicants respectfully submit that Claim 16 is in condition for allowance.

Claim 28 is allowable at least because it depends from independent Claim 25, which has been shown to be allowable. In addition, the Office Action has not stated a prima facie case of obviousness regarding the additional limitations of Claim 28. The Office Action grouped its analysis of Claim 28 alongside its analysis of Claim 16, even though the two claims share only one phrase: “the root one of the plurality of hierarchically organized plain text digital content rendering modules.” Whereas Claim 16 goes on to recite that the indicated root one **requests** recovery of content of a first type, Claim 28 goes on to recite that the indicated root one **receives** a second protected digital content of a second type. The claims diverge even further following their initial clauses. The Office Action directed virtually all of its discussion to the elements of Claim 16, not even mentioning the vast majority of Claim 28. Therefore, the Office Action has failed to state a prima facie case of obviousness for Claim 28.

Specifically, the Office Action has not alleged that the method comprises the root one,

receiving a second protected digital content of a second type; and said root one in conjunction with second at least one other one of said plurality of hierarchically organized digital content rendering modules rendering said second digital content, with said root one re-verifying one of the second at least one other one occupying an immediate downstream position in the hierarchy of modules from the root module is uncompromised before transferring the second digital content to the re-verified one of the second at least one other one occupying an immediate downstream position in the hierarchy of modules from the root module to further the rendering of the second digital content

Therefore, Applicants respectfully submit that Claim 28 is in condition for allowance.

Claims 17 and 27 are allowable at least because they depend from independent claim that have been shown to be allowable. In addition, the Office Action has not stated a prima

facie case of obviousness regarding the additional limitations of Claims 17 and 27. Specifically, the Office Action has not asserted that the following element of Claims 17 and 27 are obvious in light of the cited art: said root one in conjunction with a first (Claim 27) or second (Claim 17) other digital content rendering module “**rendering said second digital content.**” The Office Action does not assert it would be obvious in light of the cited art that the root in conjunction with at least one other module **renders** second digital content. Therefore, the Office Action has failed to state a prima facie case of obviousness for Claims 17 and 27.

CONCLUSION

Applicant submits that all pending claims are in condition for allowance. Accordingly, early and favorable action allowing all of the pending claims and passing this Application to issue is respectfully requested. The Examiner is respectfully requested to contact the undersigned at the telephone number below if there are any remaining questions regarding this Application.

We believe the appropriate fees accompany this transmission. If, however, insufficient fee payment or fee overpayment occurs, the amount may be withdrawn or deposited from/to Axios Law Group's deposit account. The deposit account number is 50-4051.

Respectfully submitted,
AXIOS LAW GROUP

Date: August 27, 2007

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